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WEATHER  
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# February-April 2022 Outlook: Perspective for the Lower Rio Grande Valley/Deep S. Texas Region

January 31, 2022

Barry Goldsmith, NWS Brownsville/Rio Grande Valley, Texas



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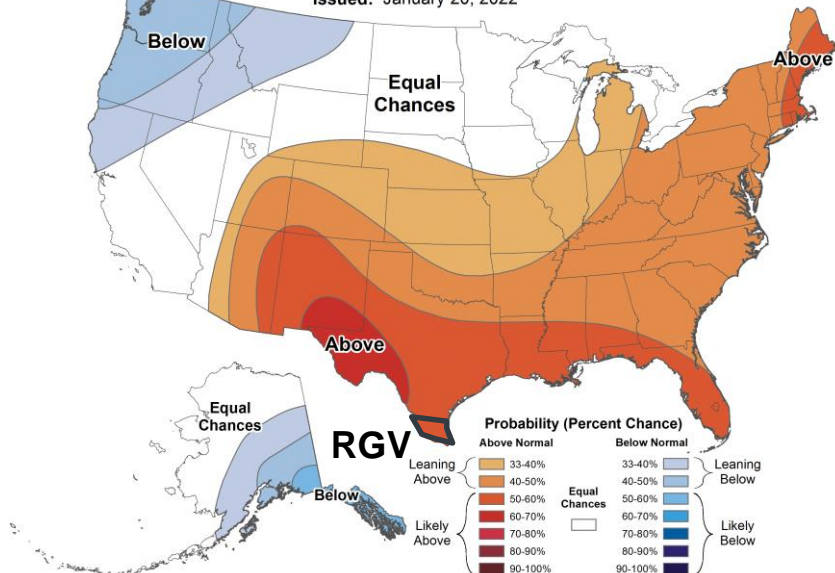
# Seasonal Forecast Feb-April 2022 - USA



## Seasonal Temperature Outlook



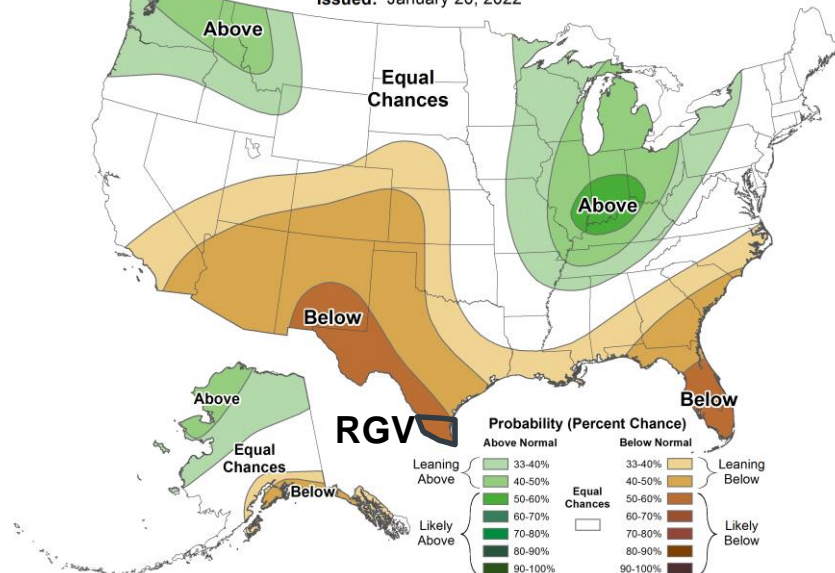
Valid: Feb-Mar-Apr 2022  
Issued: January 20, 2022



## Seasonal Precipitation Outlook



Valid: Feb-Mar-Apr 2022  
Issued: January 20, 2022





# Key Takeaways



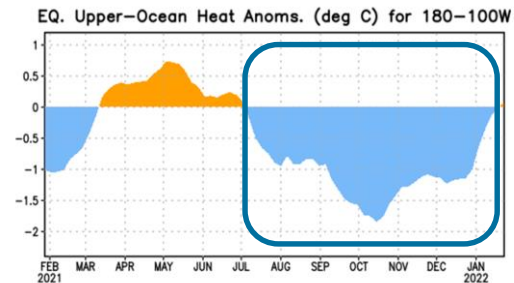
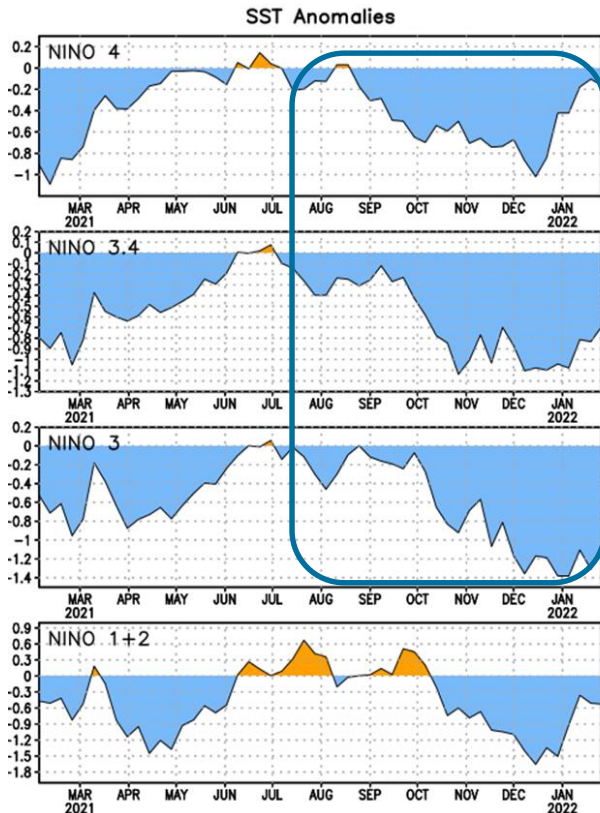
- Above to much above average temperatures, and below to much below average rainfall is forecast...
- ...but confidence is **low** based on January trends and those starting February. Should this forecast become reality:
  - **Drought** will continue to worsen across the Rio Grande Plains/Brush Country, and ultimately spread to parts of the Rio Grande Valley. **Extreme or worse drought expected by end of April in parts of the Rio Grande Plains/Brush Country**, with moderate to severe drought possible elsewhere.
  - **Wildfire spread threat will gradually, then more rapidly, increase by late March and April**, based on fuel (grass, brush, tree) availability, “curing”/dryness, and the expected warmth and drought
  - A **couple more freezes are possible in February** and possibly into early March, based on a continuation of occasional atmospheric pattern shifts that have already allowed polar air into the Deep S. Texas and RGV ranch country, with up to four freezes in January alone, including a hard (curing) freeze on January 3<sup>rd</sup>.





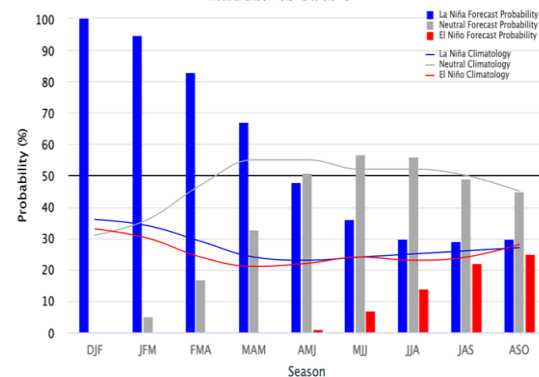
# The “Why” of the Forecast: El Niño/Southern Oscillation (ENSO) (still) in La Niña Phase

- La Niña is beginning to weaken, but should remain the dominant signal into April
- Neutral conditions are likely to become dominant by the end of April
- This situation typically favors a transition to warm and dry weather in late winter through spring



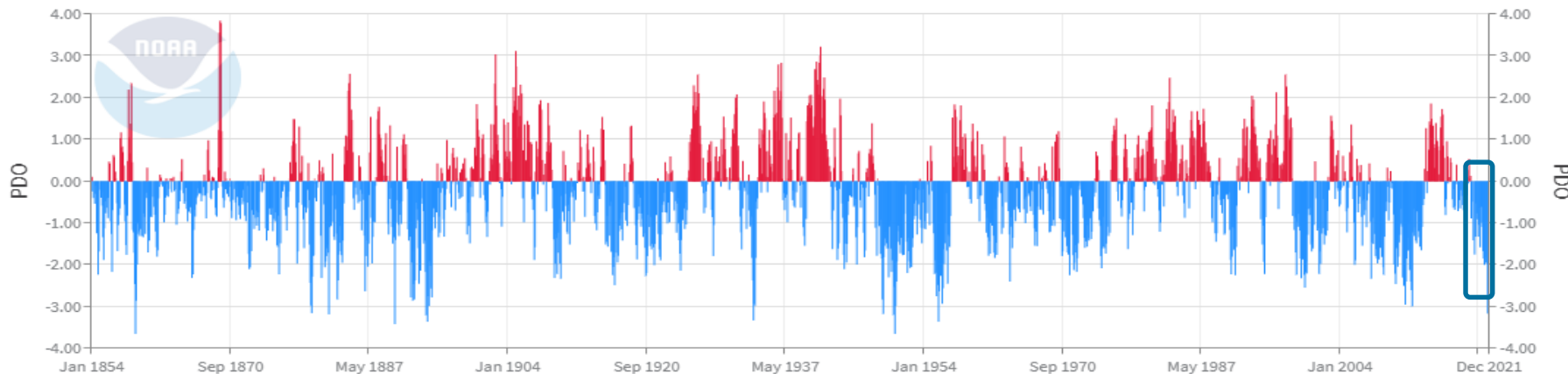
Early-January 2022 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly  
Neutral ENSO: -0.5 °C to 0.5 °C



# The “Why” of the Forecast: Pacific Decadal Oscillation (PDO) in Negative Phase

Pacific Decadal Oscillation (PDO)

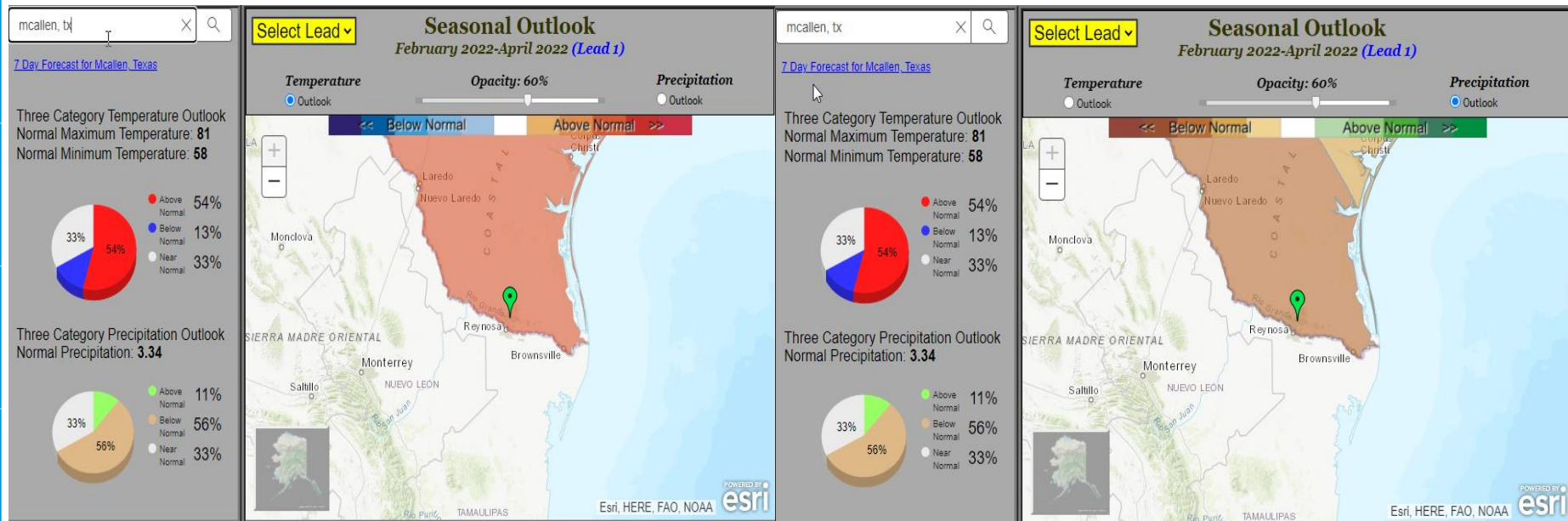


Source: <https://www.ncei.noaa.gov/pub/data/cmb/ersst/v5/index/ersst.v5.pdo.dat>

- Past negative PDOs featured both warmer than average temperatures, and freezes and freezing/frozen precipitation. La Niña combined with negative PDO has correlated well with several freezes in January, and one minor icing event (January 21)
- Drier than average conditions are favored from late winter into mid spring, but confidence remains low especially for areas along/east of IH-69C and US 281 (Brooks/Hidalgo)



# The February-April 2022 Outlook: Rio Grande Valley (McAllen as Anchor Point)



- Temperature: A 54 percent chance of above average. RGV averages: Rising from the mid 70s (early Feb.) to near 90 (end of April)
- Precipitation: A 56 percent chance of below average. RGV averages: 2.5" (RG Plains) to 4.5" (coast)
- For each: A less than 15 percent chance of below (temperature) and above (precipitation).

# The February-April “Droughtlook”

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for February 1 - April 30, 2022  
Released January 31, 2022

Consistency adjustment  
based on Monthly  
Drought Outlook for  
February 2022

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. “Ongoing” drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

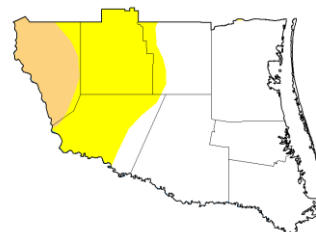
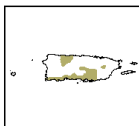
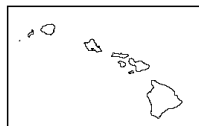
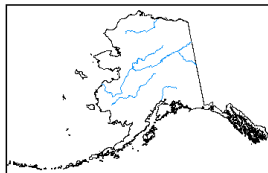
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Drought persists  
Drought remains but improves  
Drought removal likely  
Drought development likely

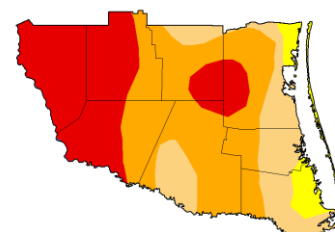


<http://go.usa.gov/3eZ73>

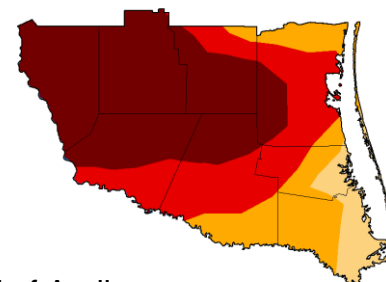
Author:  
Adam Hartman  
NOAA/NWS/NCEP/Climate Prediction Center



January 25, 2022



January 26, 2021



April 27, 2021

### Drought Classification

None  
D0 (Abnormally Dry)  
D1 (Moderate Drought)  
D2 (Severe Drought)  
D3 (Extreme Drought)  
D4 (Exceptional Drought)  
No Data

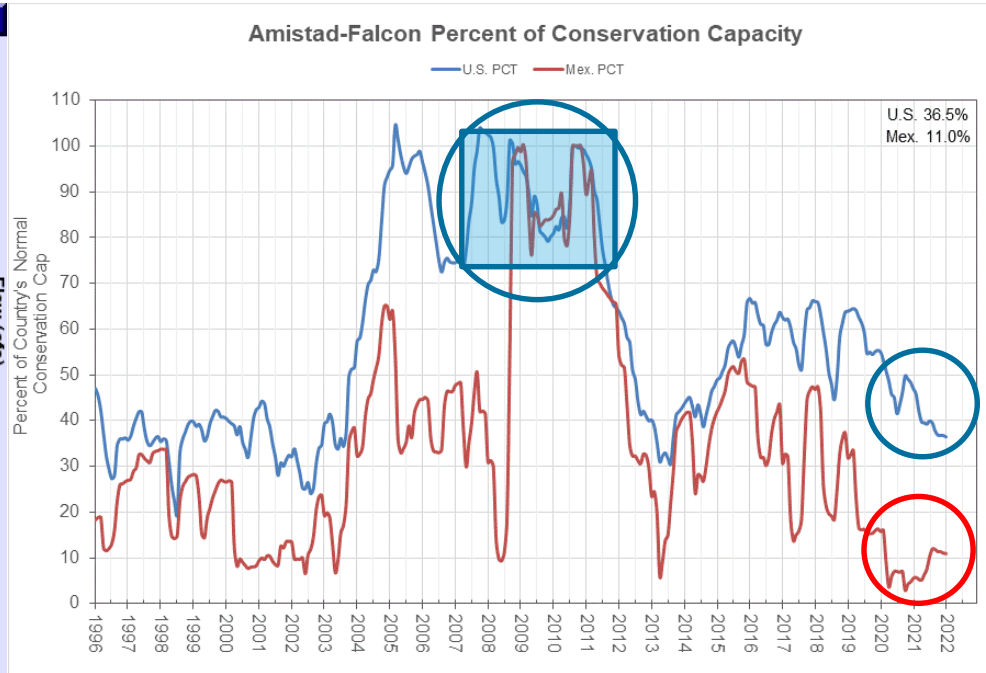
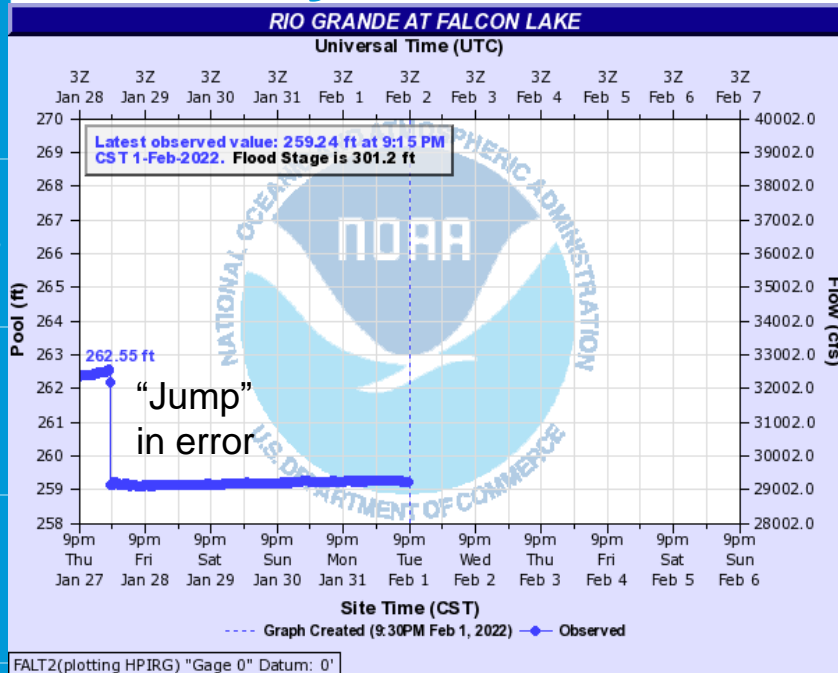
- While drought is expected to worsen (Rio Grande Plains/Brush Country/Upper Valley, it is not expected to be as intense at the end of April 2022 as in April 2021...
- ...but the dry, warm/hot forecast especially in March and April 2022 suggest potential for severe to extreme conditions to develop in these areas



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# Falcon Reservoir Still Near 30-year lows on February 1, 2022



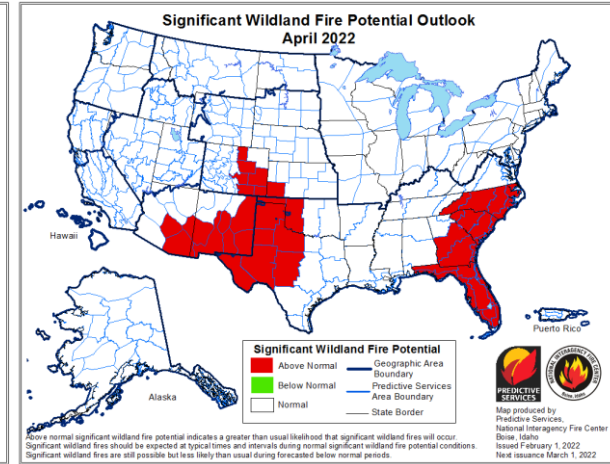
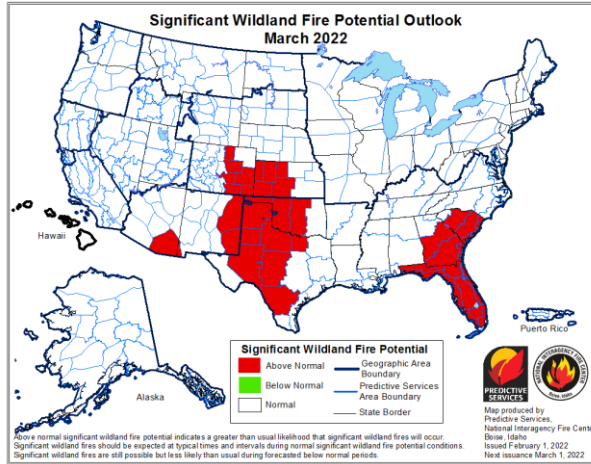
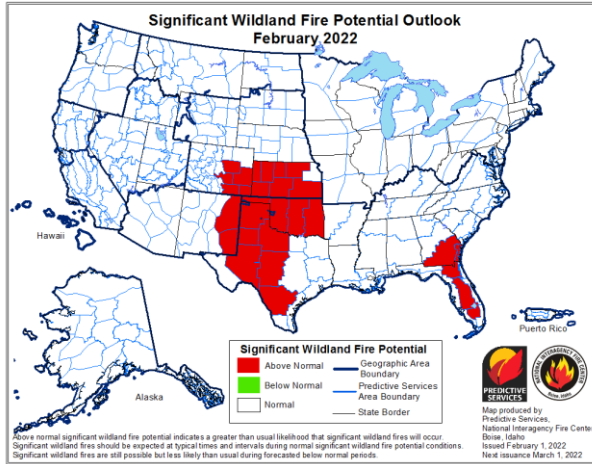
- January 2022 total capacity, Falcon Reservoir: **16 percent**
- January 2011 total capacity, Falcon Reservoir: **94 percent**







# Wildfire Spread Potential May Build by Mid Spring 2022

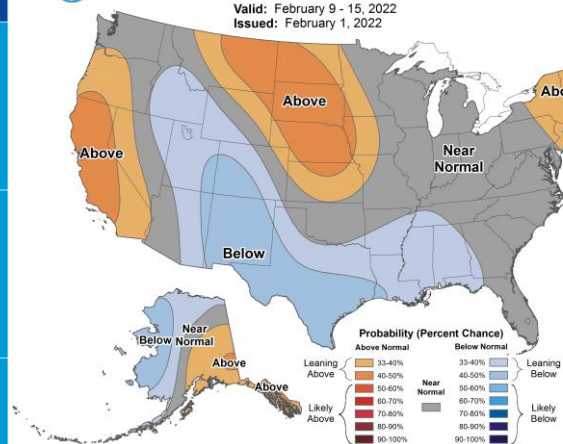


- “Just in Time” rains across the Rio Grande Valley continue to keep fuels moist...
- ...but abundant fuels, and multiple “curing” freezes in January and into February, are setting the table for potentially active to very active wildfire season in March and April
- The maps above do not include the Deep S. Texas Brush Country or parts of the Valley. This is due to the low dryness levels in early February
- 1-hour fuels (grasses) can dry out rapidly following “dry” spring fronts. 10-1000 fuels (brush and timber) could turn from moist to dry in warm to hot and dry weather later in March and April. Favored areas remain west of IH-69C/US 281 from western Brooks/Hidalgo through Zapata County.

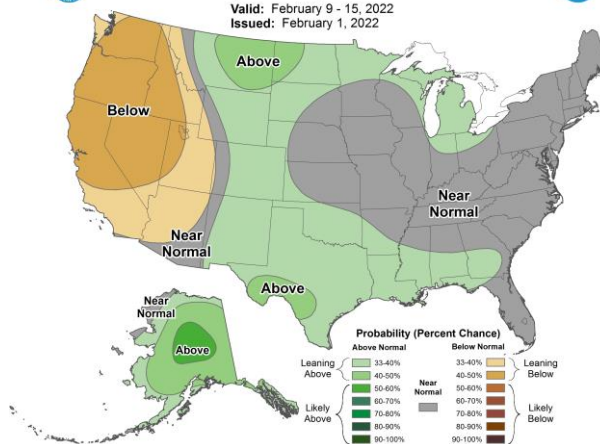


# February: Potential for a Slow Start to Spring

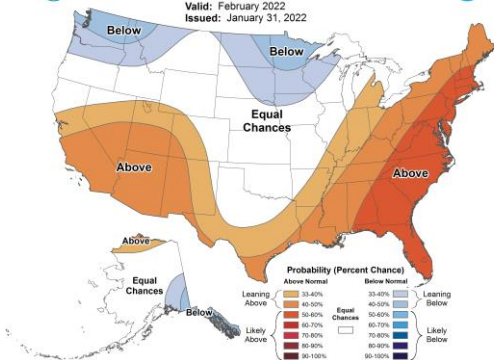
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Valid: February 9 - 15, 2022  
Issued: February 1, 2022



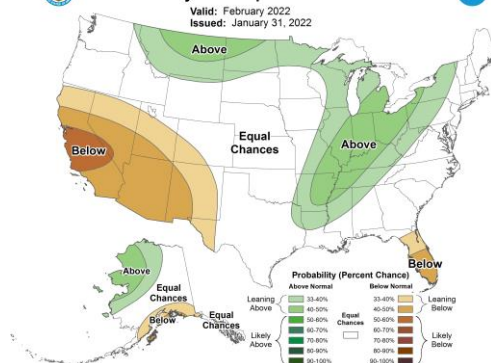
8-14 Day Precipitation Outlook  
Valid: February 9 - 15, 2022  
Issued: February 1, 2022



Monthly Temperature Outlook  
Valid: February 2022  
Issued: January 31, 2022



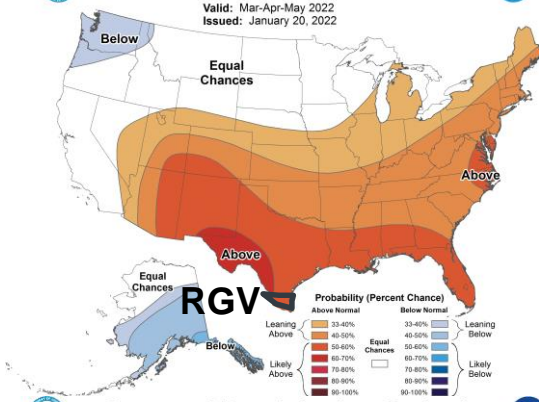
Monthly Precipitation Outlook  
Valid: February 2022  
Issued: January 31, 2022



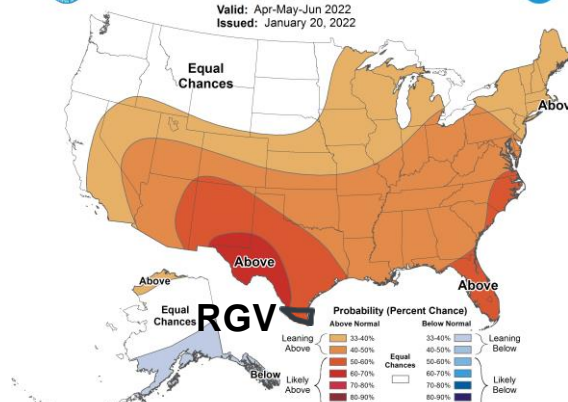
- The first half of February is expected to be **below to much below average (temperature)** and slightly **above average for rainfall**
- The second half could “flip the script” but confidence is low
- If February ends up cooler and slightly wetter than average, dryness/drought/wildfire potential will be delayed until later in March and into April

# Spring/Summer 2022: Warm/Dry Continuation?

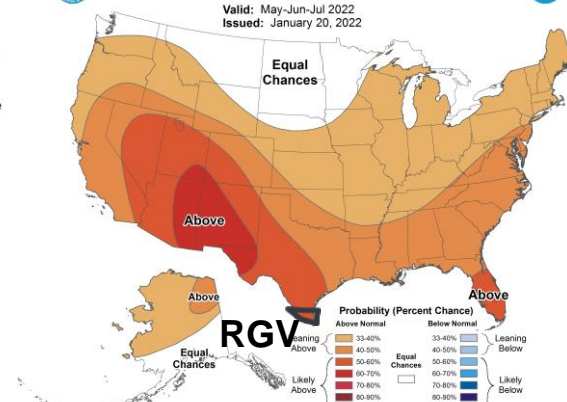
**Seasonal Temperature Outlook**  
Valid: Mar-Apr-May 2022  
Issued: January 20, 2022



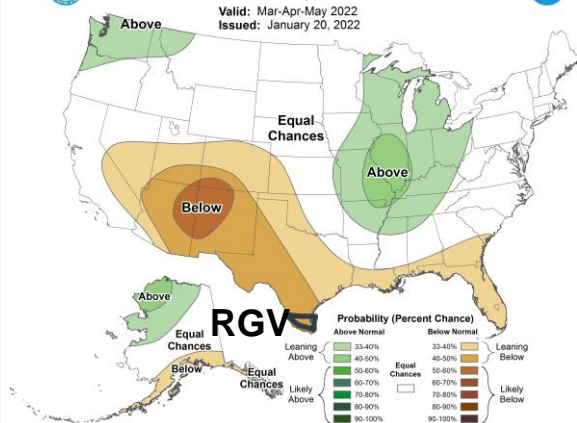
**Seasonal Temperature Outlook**  
Valid: Apr-May-Jun 2022  
Issued: January 20, 2022



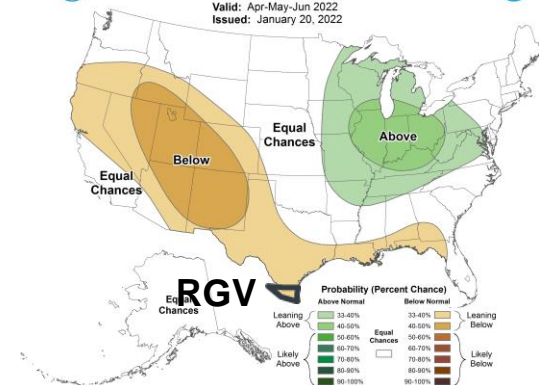
**Seasonal Temperature Outlook**  
Valid: May-Jun-Jul 2022  
Issued: January 20, 2022



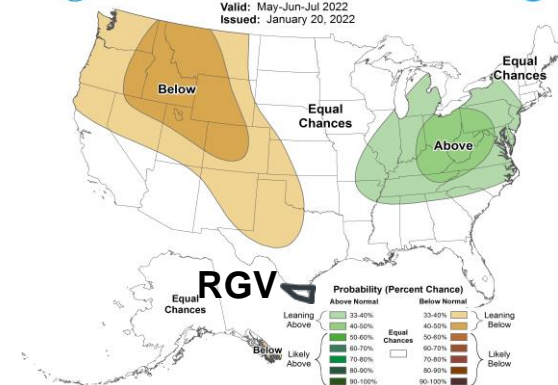
**Seasonal Precipitation Outlook**  
Valid: Mar-Apr-May 2022  
Issued: January 20, 2022



**Seasonal Precipitation Outlook**  
Valid: Apr-May-Jun 2022  
Issued: January 20, 2022



**Seasonal Precipitation Outlook**  
Valid: May-Jun-Jul 2022  
Issued: January 20, 2022



# Final Thoughts

- **Worsening drought is expected by mid spring 2022**, but development along/east of IH-69C/US 281 (eastern Brooks/Hidalgo) has been delayed by “Just in Time” rains. **Occasional rain events continuing into March would be a boon for the spring growing season in the Valley**
- Early spring is the time to review **agriculture and municipal water plans** in case of shortages by late spring, especially from western Hidalgo/Brooks to Zapata.
- **Wildfire growth and rapid spread is a concern by late March and especially April** based on this forecast. The combination of freeze-cured and relatively abundant grasses and brush (known as “fuel loading”) with increasingly warm, breezy to windy, and dry weather is a key reason. Wildland managers, ranchers, and fire services should plan mitigation strategies in February/early March to be ready for late spring.
- A **few more freezes are expected in February** and perhaps early March, especially across **rural locations of the Rio Grande Valley, Rio Grande Plains, Brush Country, and Kenedy/Brooks ranches**. Some areas will end up with six or more freeze days. **Community and agriculture protection plans (people, pets, plants, pipes, and power) should remain on the front burner in February.**